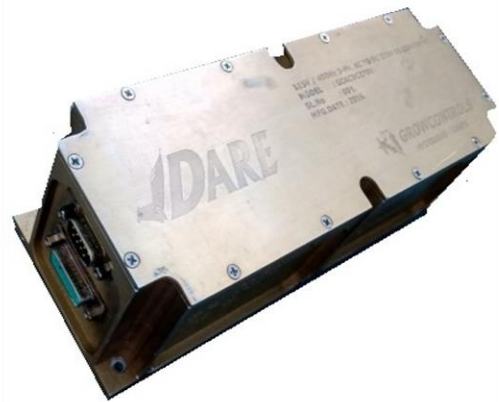


GROW CONTROL
POWER TECH PVT. LTD.

We Provide Solutions....

AN ISO 9001:2015 COMPANY



AC-DC CONVERTER

GROW CONTROL Airborne AC-DC Converters are designed with cutting-edge indigenous technology to meet the rigorous demands of defense and aerospace applications. These converters are engineered for high performance, reliability, and efficiency under extreme environmental conditions, making them ideal for use in military aircraft, helicopters, UAVs (Unmanned Aerial Vehicles), and other airborne platforms.

With more than 20 years of experience in power electronics, **GROW CONTROL** offers robust solutions that comply with military standards and ensure seamless operation in mission-critical environments

Features

- **Input Voltage:**
 - i. 115V AC, 400Hz, or 200VAC, 400Hz, 3-Ph for Aircraft Applications
 - ii. 230V, 1-Phase or 415V, 3-Ph for Military Application
- **Output Voltage:** 24V DC, 28V DC, 48V, 270V, 160V DC (Customizable as per application)
- **Power Rating:** Available in power ranges from 250W to 5kW, suitable for varied military and aerospace applications.
- **Efficiency:** Up to 95% efficiency to ensure optimal power usage and minimal heat loss.
- **Operating Temperature Range:** -40°C to +71°C for reliable operation in extreme airborne environments.
- **Rugged Design:** Built to withstand high vibration, shock, and harsh environmental conditions typical of defense and aerospace applications.
- **EMI/EMC Compliance:** Designed in accordance with MIL-STD-461 E/F/G standards to ensure electromagnetic compatibility.
- **Overload & Short Circuit Protection:** Includes integrated protection features for enhanced system reliability.

- **Low Weight & Compact Size:** Lightweight design that fits easily into airborne systems, minimizing space constraints and reducing aircraft weight.

Key Advantages

- **Indigenous Technology:**
100% designed, developed, and manufactured in India, reducing dependency on foreign systems and supporting India's defense self-reliance.
- **Military-Grade Reliability:**
Built to withstand the toughest airborne environments, these converters ensure continuous, high-performance power supply for mission-critical operations.
- **Customizable Options:**
GROW CONTROL offers customization for output voltage, power capacity, and other parameters to match specific defense and aerospace applications.
- **Energy-Efficient Design:**
The high-efficiency design ensures minimal power loss, translating to longer operational time and reduced cooling requirements for airborne platforms.
- **Compliance with Defense Standards:**
GROW CONTROL airborne AC-DC converters comply with **MIL-STD-704E/F** (aircraft electrical power characteristics) and **MIL-STD-810E/F/G** (environmental testing), ensuring they meet the most stringent defense requirements.
- **Wide Range of Applications:**
Suitable for use on various airborne platforms including **military aircraft, helicopters, UAVs, and defense electronics systems.**

Applications

1. **Military Aircraft:** Powering mission-critical onboard systems with stable and reliable DC power.
2. **Helicopters:** Supplying robust power to avionics and communications systems.

3. **UAVs (Unmanned Aerial Vehicles):** Offering lightweight and compact power solutions for UAV platforms.
4. **Defense Electronics:** Supporting critical defense systems requiring stable AC-DC conversion in harsh airborne environments.
5. **Aerospace Equipment:** Powering advanced instrumentation and control systems

Customization Options

GROW CONTROL provides customizable solutions to meet the unique power requirements of various defense and aerospace applications. Our team of engineers collaborates with defense agencies and manufacturers to design solutions tailored to specific airborne platforms. Some customizable features include:

- Output Voltage Levels
- Power Ratings
- Size and Form Factor Adjustments
- Specific Environmental Hardening
- Enhanced Protection Features

Why Choose **GROW CONTROL**?

- **Proven Track Record:** With over three decades of experience in power electronics, **GROW CONTROL** is trusted by defense and aerospace agencies across India.
- **Indigenous Innovation:** Our indigenous technology development ensures that all products meet the specific requirements of Indian defense forces while promoting technological self-reliance.
- **Stringent Quality Control:** All products undergo rigorous testing to ensure compliance with military standards and optimal performance under extreme conditions.
- **Customer Support:** From product design to post-delivery support, **GROW CONTROL** ensures seamless customer experience with high-quality solutions and reliable after-sales service.



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Certifications

- MIL-STD-704 D/E/F – Aircraft Electrical Power Characteristics
- MIL-STD-810 F/G/H– Environmental Testing for Defense Equipment
- MIL-STD-461 E/F/G – Electromagnetic Interference (EMI) Compliance
- MIL-HDBK-2164A – Environmental Stress Screening
- MIL-STD-810 G – Environmental
- MIL-STD-461 E/F/G EMI/EMC
- ISO 9001:2015 – Quality Management Systems



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Technical Specification

Model no	GC260W70P-MOPS	GC270V2AAC-DC	GC160V40AAC-DC	GC48V145ADCPS
Input voltage (V AC)	115V, 400Hz, 3-Ph	115V, 400Hz, 3-Ph	415V±10%, 3-Ph, 50Hz	415V±10%, 3-Ph, 50Hz
Output voltage (V DC)	+5.1/12A +15/4.5A +12/5A -15/2A -12/2A -5.2/2A -2V/1.5A	270	160	48
Output power (W)	260W	720W	6400	7000
Frequency (Hz)	-	394 to 404		-
Efficiency (%)	≥70	≥90	≥90	≥90
Ripple	+5V-50mV +15V-70mV +12V-60mV -15V-70mV -5V-50mV -2V – 50mV	2%	200 mV	-
Line regulation (%)	2	1.5	±0.3	-
Load regulation (%)	2	1.5	±0.3	-
Power factor (%)	-	0.95	0.95	-
Noise	+5V- 100mV +15V-100mV +12V-100mV -15V-100mV -5V-100mV -2V-100mV	-	-	-



OUR CLIENTS



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